

wherein the lighter phase comprises heptane and acetone or heptane and isopropanol, the heavier phase comprises water and acetone or water and isopropanol, and the product is a rapamycin or an ascomycin.

12. (new) A process of claim 11, wherein the lighter phase comprises about 25 wt-% n-heptane and about 75 wt-% acetone, or about 90 wt-% n-heptane and about 10 wt-% isopropanol.

13. (new) A process of claim 11, wherein the heavier phase comprises about 50 wt-% water and about 50 wt-% acetone, or about 68 wt-% water and about 32 wt-% isopropanol.

14. (new) A process for purifying on a large scale a product from a feedstock containing one or more impurities having closely-related physical properties to the product, which process comprises the steps of

a) feeding the feedstock into a first extraction column under conditions adapted for separating more- or less-polar impurities from the feedstock, wherein a lighter phase flows counter to a heavier phase, thereby forming a first output in one phase containing the product containing less more- or less-polar impurities, and

b) feeding the first output into a second extraction column under conditions adapted for separating less- or more-polar impurities respectively from the first output, wherein the lighter phase flows counter to the heavier phase, thereby forming in one phase a second output, so that the second output contains the product in a substantially purified form, wherein the lighter phase comprises heptane and acetone or heptane and isopropanol, the heavier phase comprises water and acetone or water and isopropanol, and the product is a cyclosporin.

15. (new) A process of claim 14, wherein the lighter phase comprises about 25 wt-% n-heptane and about 75 wt-% acetone, or about 90 wt-% n-heptane and about 10 wt-% isopropanol.

16. (new) A process of claim 14, wherein the heavier phase comprises about 50 wt-% water and about 50 wt-% acetone, or about 68 wt-% water and about 32 wt-% isopropanol.

17. (new) A process of claim 11, wherein the product is rapamycin, 40-O-(2-hydroxy)ethyl rapamycin, ascomycin, 33-epi-chloro-33-desoxyascomycin, or FK506.

18. (new) A countercurrent extraction column having between 100 and 200 compartments, and an overall efficiency of about 10 to 30%.

19. (new) A product which is a rapamycin or an ascomycin produced by a process of claim 11.